

ABSTRACT

An improved method for high-volume production of coated stents with highly uniform stent coatings using a roll coating technique is provided. In a first embodiment, uncoated stents are placed onto rotating stent holders with automated stent handling equipment. The holders are mounted on an endless conveyer belt which advances the stents toward a stent coater. As the stents advance through the coater, the holders rotate, thereby rolling the stents about their longitudinal axes as coating material is sprayed toward them, ensuring the stents are uniformly coated on their exterior and interior surfaces. After the conveyer turns to carry the coated stents back toward the loading area, the rotating stents pass again through the coating spray, downstream of the initial coating location, thereby increasing the efficient utilization of the coating material. The conveyer then advances the coated stents to an unloading area for removal before the holders return to the stent loading area to receive new stents.